

# Notice of Allowability

Application No.

10/665,080

Examiner

Juan A. Torres

Applicant(s)

JANG ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment - After Non-Final Rejection filed on 05/11/2007.
2. ☒ The allowed claim(s) is/are 1-10.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

The modifications to the drawings were received on 05/11/2007. These modifications are accepted by the Examiner.

In view of the amendment filed on 05/11/2007, the Examiner withdraws drawings objections of the previous Office action.

### ***Specification***

The modifications to the specification were received on 05/11/2007. These modifications are accepted by the Examiner.

In view of the amendment filed on 05/11/2007, the Examiner withdraws Specification objections of the previous Office action.

## **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Gergely T. Zimanyi on 5/25/2007.

The application has been amended as follows:

- a) The recitation in line 1 of claim 1 "comprising" is changed to "comprising:"
- b) The recitation in lines 3-4 of claim 8 "alternately outputting an n-bit signal and a reverse signal of the n-bit signal at every cycle of the counter, the n-bit signal being

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counted by an n-bit counter" is changed to "counting an n-bit signal by an n-bit counter; alternately outputting an n-bit signal and a reverse signal of the n-bit signal at every cycle of the counter".

### ***Claim Objections***

The modifications to the claims were received on 05/11/2007. These modifications are accepted by the Examiner.

In view of the amendment filed on 05/11/2007, the Examiner withdraws claims objections to claims 1-6 of the previous Office action.

### ***Claim Rejections - 35 USC § 112***

The modifications to the claims were received on 05/11/2007. These modifications are accepted by the Examiner.

In view of the amendment filed on 05/11/2007, the Examiner withdraws claims rejections under 35 USC § 112 second paragraph to claims 8-10 of the previous Office action.

### ***Response to Arguments***

Applicant's arguments, see Amendment - After Non-Final Rejection, filed 05/11/2007, with respect to claims 1 and 8 have been fully considered and are persuasive. The rejections of claims 1 and 8 have been withdrawn.

### ***Allowable Subject Matter***

Claims 1-10 are allowed.

The following is an examiner's statement of reasons for allowance: claim 1-10 are allowed because the references cited fail to teach, as applicant has, an

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electromagnetic interference cancellation system comprising a control signal generation unit having a counter that counts  $n$ -bit signals to output a first output signal of  $n$  bits with a count value, and a second output signal having a level that is opposite to the first output signal, the control signal generation unit alternately outputs the first and second output signals as control signals according to a cycle of the counter; a voltage control unit that outputs a voltage having a step index level corresponding to the count value of the control signal; and an oscillator that generates a clock signal having a frequency corresponding to the voltage outputted from the voltage control unit; an EMI cancellation system comprising a control signal generation unit comprising a counter having  $n$  first flip-flops that respectively output first and second output signals with opposite levels, the  $n$  first flip-flops being coupled to each other in series and each first flip-flop reversing outputs at every cycle of the first and second signals of a previous first flip-flop, a second flip-flop that outputs third and fourth output signals having opposite levels and being reversed at every cycle of the first and second output signals of a final first flip-flop of the counter, and a multiplexer for passing the first signals of the  $n$  first flip-flops as a control signal of  $n$  bits when the third output signal of the second flip-flop is a first level and passing the second output signals of the  $n$  first flip-flops as the control signal of  $n$  bits when the third output signal of the second flip-flop is a second level, a voltage control unit that outputs voltages having respective step index levels corresponding to count values of  $n$ -bit control signals, and an oscillator that generates a clock signal having a frequency corresponding to the step index level of the voltage of the voltage control unit; and a method for canceling electromagnetic interference by generating

clock signals having various frequencies in a predetermined range, the method comprising counting an n-bit signal by an n-bit counter and alternately outputting an n-bit signal and a reverse signal of the n-bit signal at every cycle of the counter, generating an output voltage having a step index level which increases or decreases stepwise according to a count value of the control signal, and generating a clock signal having a frequency corresponding to the level of the output voltage, as the applicant has claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is 571-272-3119. The examiner can normally be reached on 8-6 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Juan Alberto Torres  
05-23-2007

TEMESGHEN GHEBREYESAE  
PRIMARY EXAMINER  
6/11/07